Highlights

- ✓ Projected future rate increases are 3 percent annually in both the Water Utility and Sewer Utility. The use of temporary note financing to spread out bonded debt issuance is the primary reason for the continued low projection.
- ✓ The operational phase of the Aquifer Storage and Recovery (ASR) project is included in the budget beginning in 2003.
- ✓ The new Northwest Sewage Treatment Plant (STP #3) opened in early 2003.
- ✓ Plant siting studies are underway for three new satellite sewage treatment plants and an additional water production plant. Design on the Mid-Continent Sewage Treatment Plant is expected to begin once a suitable site has been identified.
- ✓ The Department management is reorganized with a new Assistant Director overseeing the System Planning and Development, Water Distribution, and Sewer Maintenance functions.

The Water and Sewer Department exists to provide quality, reliable, customer-convenient water and sewer service to the citizens of Wichita and all other Utility customers.

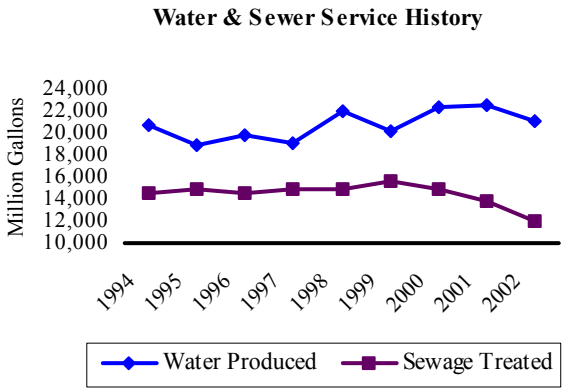
Overview

The Water and Sewer Department supplies and distributes high quality water, and collects and treats wastewater for the City of Wichita and areas surrounding Wichita which are part of the Water and Sewer Utilities. Services provided include pumping and purifying water, maintaining the water distribution and wastewater collection systems, treating wastewater and planning for future needs.

The Water Utility produces, treats, and distributes approximately 20 billion gallons of water per year on average for its customers. Due to the hot, dry summer of 2002, the Utility delivered 21.5 billion gallons of water to customers. The Sewer Utility collects and treats approximately 15 billion gallons per year from its customers. Service levels and water consumption in particular, are driven primarily by system growth rates as well as weather conditions that affect consumption patterns. Despite the large volume of water produced and sewage treated, the Water & Sewer Utilities consistently exceed environmental regulations, often before such regulations are put into effect. This proactive approach assists in planning and helps to ensure that Utility customers receive excellent service value.

Extensive capital improvement planning ensures the Water and Sewer Utilities will continue to provide high quality water production and distribution and sewage collection and treatment well into the future. Currently the City has a Water Supply Plan in place to support growth and development through 2050. Additional sewerage facilities are also planned, to respond to increasing needs and to continue to meet or exceed environmental regulations.

The water treatment plant at Sim Park.



Selected Operations Performance Measures
Per 1,000 gallons

	2001	2002	2003	2003	2004
Water treatment cost	0.29	0.32	0.31	0.31	0.31
Sewer treatment cost	0.54	0.67	0.60	0.41	0.58

Finance and Operations

The **Production and Pumping Division** procures, treats and pumps water from Cheney Reservoir and the City's local supply wells near Halstead. This activity ensures that adequate water supply and pressure is available to citizens when needed. Costs associated with the collection, treatment and pumping of water, including electricity, chemical costs and infrastructure improvements, represent the largest single category of operations and maintenance expenditures in the Water Utility budget.

In accordance with State law and the comprehensive Water Supply Plan, the Utility has sought to reduce the amount of water required from groundwater sources (wells) in an attempt to minimize impacts on groundwater levels. In addition, the Utility is implementing the Aquifer Storage and Recovery (ASR) project, designed to withdraw excess rainfall from the Little Arkansas River during periods of wet weather. The water drawn from the river is then treated and injected into the aquifer to partially offset Utility withdrawals from the well field groundwater supply.

Water is delivered under pressure to citizens, thanks to dedicated staff and equipment investments such as this 2,000 horsepower pump at Hess Pump Station. This pump alone handles approximately 30,000 gallons of water per minute.

The ASR project will be implemented from 2002 to 2010, and will double the amount of infrastructure in the well field. The first phase, currently being implemented, adds 17 wells, three recharge basins, 11 miles of power lines, and nine miles of water lines. Additional staffing and equipment to operate and maintain these facilities are included in the budget beginning in 2003. Additional staff and equipment will be required in 2005 and 2007 as more wells, basins, power lines, and water lines are placed into service.

Selected Maintenance Performance Measures
Per 1,000 Line Miles

	2000	2001	2002	2003	2004
Water main breaks	600	573	369	375	350
Sewer stoppages	215	154	184	180	175

The **Customer Service Division** is the primary public contact point for the Utilities. Customer Service staff read water meters and manage the billing and collection for over $65 million in annual Utility revenues. Storm Water Utility revenues are also collected by Customer Service staff.

An integrated Call Center is included in the budget. The Call Center will streamline public contact with the Utility, allowing all callers with water service or billing issues to call one number. The Call Center will also streamline departmental operations by consolidating record keeping from three locations to one. Finally, information in the customer service (billing) system will be linked with data in the asset management system, so that departmental operations and engineering staff will have access to the most up-to-date customer and maintenance information. This significant increase in customer service will be accomplished without adding any personnel.

Recently, the Water Utility has completed pilot tests of a relatively new technology - Automated Meter Reading (AMR). This technology allows meters to be read electronically from a distance, enabling them to be read much faster, more efficiently and with fewer errors. The 2003, 2004 and 2005 budgets include funding to continue the conversion to AMR by providing for the system's installation on all new metered services requested. As the technology continues to improve and the percentage of AMR-equipped meters increases throughout the City, meter reading errors and costs will be dramatically reduced. In the current budget cycle, AMR will allow the system to continue to expand without hiring additional meter readers, while reducing overtime for current employees. In the future, AMR will allow the Customer Service Division to serve a larger customer base with fewer employees.

The **Water Distribution Division** maintains over 1,500 miles of water mains, 28,000 valves, 8,000 fire hydrants, and 150,000 water service lines and meter sets. Over 1,200 main and service line leaks are repaired every year. An ongoing preventive maintenance and inspection effort is underway to prevent leaks and breaks before they occur and require more expensive repair or reconstruction.

The recommended Water Distribution budget includes additional funds for increased levels of pavement cuts due to line breaks and for additional contractual installation of new services, which are offset by additional revenues.

Water Distribution is moving to new and newly remodeled facilities in 2003. The main Distribution facility is being relocated from Sim Park (Museum) Drive to the City's Central Maintenance Facility (CMF) campus, centralizing most City maintenance operations in one location. Work crews are also being distributed to the West and Northeast substations, which will require increased coordination within the division but will reduce travel times for repair crews.

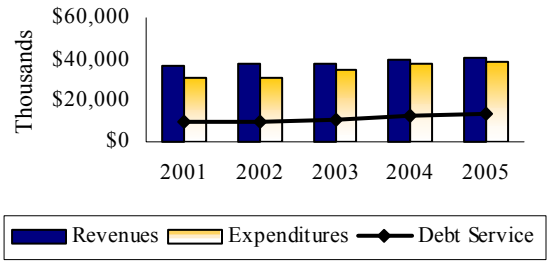
Sewage Treatment Division staff operates and maintains the treatment plants, five odor control injection sites and 61 lift stations. Wastewater entering the sanitary sewer system receives primary treatment at Sewage Treatment Plant #1 (constructed in 1931) and secondary treatment at Plant #2 (constructed in 1960). The City recently acquired the Sedgwick County Sewer District collection and treatment system, including the Four Mile Creek facility. This addition will ensure more efficient and cost-effective sewer service for customers throughout the region. The Northwest Sewage Treatment Plant (Plant #3) opened in early 2003. Now that the new plant is open, a major upgrade and automation project will begin at Four Mile Creek. When completed, both Four Mile Creek and Plant #3 will be able to operate with very little human interaction due to the high degree of automation. Only three employees were added for the operation and maintenance of Plant #3, one to supervise plant operations, one for grounds maintenance and a third to transport sludge from the new facility to the biosolids processing facilities at Plant #2.

The Sewer Utility was recently given a National Pre-treatment Excellence Award for its Industrial Pre-treatment Program. This award is given to pre-treatment programs that have achieved superior industrial compliance levels with wastewater discharge regulations and have implemented innovative processes within the program. Some of the mechanisms used include a comprehensive inspection program, a biological monitoring program, a combined storm water and industrial monitoring program, and participation in public education events like the Pre-treatment Workshop and Boeing Earth Day Fair.

Sewer Maintenance Division staff are responsible for cleaning and maintaining approximately 1,450 miles of sanitary sewer laterals, mains, interceptors and manholes.

The new Plant #3, also referred to as Cowskin Creek Water Reclamation Facility opened in January of 2003. The Plant has been praised for its innovation and the City has won awards for the development of this project.

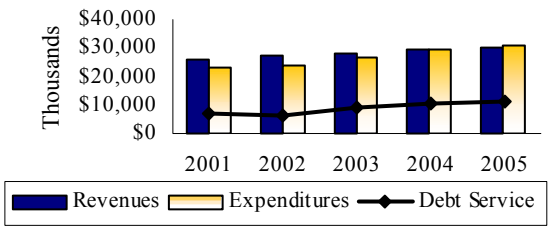
Water Utility Operations



Combined Water & Sewer Financial Summary
$ in Thousands

	2002	2003	2004
Water Sales Revenue	36,515	36,721	37,725
Sewer Sales Revenue	27,314	27,331	28,467
Interest	1,223	2,000	2,300
Revenue - All Sources	65,052	66,052	68,492

Sewer Utility Operations



The aim of this activity is to prevent tree roots and other intrusions from blocking or damaging the system and to minimize inflow and infiltration from other sources that increase the volume of sewage reaching the plants, increasing the overall cost of treatment. This preventive maintenance program increases Utility efficiency by addressing problems before they occur, thereby eliminating the need for more expensive maintenance or repair.

Utility operating budgets reflect additions for deferred vehicle replacements, debt service requirements, and projected increases in bad debt costs caused by delays in the configuration of the Utilities' new billing system. The Sewer Utility budget also reflects additional operations and maintenance costs associated with the Four Mile Creek facilities. In the Water Utility, continued allowances have been made in the budget to account for sales tax.

The Water and Sewer utilities are facing capital costs in the coming years for refurbishment of existing infrastructure, and expansion of infrastructure to accommodate urban growth. Debt service is the largest single variable affecting the rate structure of each utility. Rate change recommendations are three percent annually in each Utility, as shown in the accompanying table.

There are major developments under way to modernize the water quality facilities. Here construction workers are redeveloping the Four-Mile Creek Plant. Four-Mile is undergoing almost $6 million in renovations and reconstruction to better serve the public.

Projects, such as the Water Supply Plan, construction of the Northwest Sewage Treatment Plant (Plant #3), and required improvements to the recently acquired Sedgwick County sewer system (Four-Mile Creek), represent sound utility planning to support long-term growth and development.

Funding these projects, however, will result in short-term financial impacts in terms of urgency to increase rates. The City's utilities are facing an "intergenerational equity" issue with current utility customers bearing a disparate share of the costs associated with financing these major capital improvements that will also benefit future utility customers.

Annual Water & Sewer Rate Increases Projected for 2003-2005

	2002	2003	2004	2005
Water Rate Increases	3%	3%	3%	3%
Sewer Rate Increases	3%	3%	3%	3%

Bonded Debt Service Coverage Ratio (must equal or exceed 120%)

	2002	2003	2004	2005
Water Coverage Ratio	186%	177%	173%	175%
Sewer Coverage Ratio	157%	133%	113%	104%

2002 Water Rate Structure Cost per thousand gallons

	Inside-City Rate	Outside-City Rate
Block 1 (0-110% AWC)	$0.67	$1.04
Block 2 (111-310% AWC)	$2.41	$3.76
Block 3 (above 310% AWC)	$3.63	$5.66

The years 2001, 2002 and 2003 were peak times in the Water and Sewer Capital Improvement Programs. The Water Supply Plan, relocation of the Water Distribution facility, and construction of Sewage Treatment Plant #3 required significant outlays from the utility funds. This leads to increased pressure on rates; however, reduced capital expenditures in 2004 and beyond indicate that the best course may be to delay some bonded debt issuance until CIP financing becomes more moderate in later years. This requires the use of temporary notes as interim financing during and immediately following construction to maintain positive cash flow until bonds are issued.

The budget recommendation assumes an issuance of notes for both utilities in 2003 to be renewed for four years. After that time, regular 20-year revenue bonds could be issued. Due to issues including intergenerational equity and useful projecct life, some projects will be paid for with 25 year bonds. This reduces annual debt service costs and more equitably spreads the cost of projects with 40 to 50 year useful life. Actual issuance date for the bonds and length of time notes are required will depend on a variety of factors including market conditions and progress with the capital projects.

Any future rate changes will be subject to review and approval by the City Council.

Because of sound fiscal management and planning for future capacity and financing needs, the Water and Sewer Utilities are in a solid financial position. This leads to a higher bond rating given by financial institutions evaluating utility bonds. A higher bond rating reduces overall debt service costs by reducing the interest rate at which debt can be issued in any given year. Part of this financial strategy involves partial financing of capital improvements through cash reserves, which further reduces the cost of improvements by eliminating bond issuance and interest costs.

Revenue bond covenants require that after operating and maintenance expenses, net annual revenues must equal at least 120 percent of the annual debt service payments for principal and interest. This is the bonded debt coverage ratio. A higher ratio provides a cushion against fluctuations in utility revenues, which can be significant given the impact of weather changes on utility revenues.

Bond rating agencies and the bond market typically rate utilities as superior if the bond coverage ratio is relatively high. Although recent capital expenses have been significant, and the Sewer Utility ratio is expected to fall below the 120 percent threshold, the combined Water and Sewer ratio will stay above 120 percent through the planning period.

Water rates are based on a customer's average winter consumption (AWC), which is defined as the mean monthly consumption calculated during the months of December, January, February and March. The AWC is calculated in April and is used as the basis for billings in the following twelve months. The minimum monthly AWC for any metered service on a meter sized at one inch or less is 6,000 gallons. In addition, a minimum monthly charge is assessed for all customers regardless of consumption. The water rate increases as consumption moves up from one block to the next. The AWC rate structure is designed to encourage conservation by imposing a penalty on excessive water usage.

Water Utility Fund Budget Summary

	2002 Actual	2003 Adopted	2003 Revised	2004 Adopted	2005 Approved
Water Fund Revenue	**37,442,714**	**37,216,110**	**37,921,410**	**39,225,420**	**40,223,420**
Personal Services	7,060,512	7,155,550	7,018,130	7,164,910	7,418,760
Contractual Services	5,386,099	6,561,680	6,873,920	6,836,070	6,640,780
Commodities	2,630,726	2,173,410	2,061,210	2,080,380	2,106,380
Capital Outlay	3,019,091	2,979,850	2,937,560	3,162,790	3,162,850
Other	12,854,492	16,440,630	16,415,680	18,746,600	19,592,820
Total Water Fund Expenditures	**30,950,920**	**35,311,120**	**35,306,500**	**37,990,750**	**38,921,590**
Revenue Over (Under) Expenditures	6,491,794	1,904,990	2,614,910	1,234,670	1,301,830
Transfer to (from) Reserves	**6,491,794**	**1,904,990**	**2,614,910**	**1,234,670**	**1,301,830**
Total full-time positions	182	184	183	183	183
Total part-time positions	37	36	36	36	36
Total FTE positions	205.75	207.00	206.25	206.25	206.25

Sewer Utility Fund Budget Summary

	2002 Actual	2003 Adopted	2003 Revised	2004 Adopted	2005 Approved
Sewer Fund Revenue	**27,609,070**	**30,120,000**	**28,130,600**	**29,266,600**	**30,441,600**
Personal Services	7,811,930	8,448,190	8,209,060	8,495,670	8,785,610
Contractual Services	4,362,456	4,720,380	4,308,860	4,343,770	4,344,970
Commodities	2,221,512	2,312,840	2,222,320	2,204,170	2,204,170
Capital Outlay	1,006,061	1,107,990	1,035,180	847,850	1,214,840
Other	8,430,444	9,511,410	11,022,570	13,316,910	14,263,110
Total Sewer Fund Expenditures	**23,832,403**	**26,100,810**	**26,797,990**	**29,208,370**	**30,812,700**
Revenue Over (Under) Expenditures	3,776,667	4,019,190	1,332,610	58,230	(338,500)
Transfer to (from) Reserves	**3,776,667**	**4,019,190**	**1,332,610**	**58,230**	**(338,500)**
Total full-time positions	151	155	155	157	157
Total part-time positions	2	2	2	2	2
Total FTE positions	152.00	156.00	156.00	158.00	158.00